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Is STEMI Patient Care the Wave of the Future?

A systems-based approach for the care of acute ST-elevation myocardial infarction (STEMI) patients is gaining significant attention across the country, with EMS becoming the new "mega-consumer" of quality STEMI care, says Ivan Rokos, MD, FACEP, assistant clinical professor at the Geffen School of Medicine at UCLA and emergency medicine physician at Olive View-UCLA and Northridge Hospitals in Los Angeles.

"In any region, about 50% of all STEMI heart attack patients treated at a cath lab-capable hospital are brought in by EMS," says Rokos. "The other 50% of patients self-transport.

"There are three ways for paramedics to identify a STEMI in the field," he adds. "The first is direct interpretation, where they read the EKG themselves. The second option is for the computer on the EKG machine to read it for them, and that's what we do here in Los Angeles. If it reads acute MI, that's the paramedics' ticket to go to a STEMI receiving center. The third option is for paramedics to transmit the EKG to a hospital, have the hospital interpret it and give the go-ahead to transport to the cath lab."

One critical issue in Los Angeles is the false-positive rate for cath lab activation, says Rokos. "Paramedics should make sure they have a good quality tracing," he says. "We've had cases where the computer misinterpreted the tremors of a patient with Parkinson's as an acute MI. If it's not clear, the paramedics should convey that to the base station."

So, is STEMI care the wave of the future?

"Yes," says Rokos, "for two reasons. The American College of Cardiology D2B Alliance's seventh core strategy is using the prehospital EKG to activate the cath lab. Also, the American Heart Association's Mission: Lifeline project says that STEMI care is a lifeline of things that need to occur: The patient needs to recognize his symptoms and call 9-1-1; EMS needs to diagnose patients quickly and get them to a STEMI receiving hospital; the ED needs to be ready; and the cath lab needs to be activated early on so they're ready as well."

Marie Nordberg, Associate Editor

Dr. Rokos is a featured speaker at EMS EXPO, October 15-17, in Las Vegas, NV, where he will present EMS and STEMI: The Evolution of a Major Paradigm Shift. For more information, visit www.emsexpo2008.com.

MISSOURI TASK FORCE TACKLES STEMI, STROKE

The state of Missouri and Missouri Foundation for Health have brought together more than 100 of the state's top emergency-care minds to find ways to reduce the morbidity and mortality associated with stroke and ST-elevation myocardial infarction.

The Department of Health and Senior Services (DHSS), which oversees EMS in the state, is working with partners in the Time Critical Diagnosis Task Force to issue recommendations and design systems to improve the timely diagnosis and care of these urgent patients. The time-critical diagnosis (TCD) effort is in keeping with current trends toward regionalization in emergency care: the right patient to the right place at the right time. Its first phase, running through June, is aimed at designing structures to support the timely transport, diagnosis and treatment of stroke and STEMI patients, and developing plans to implement them.

"In areas where stroke systems have been implemented," state EMS director Bill Jermyn said of the project, "including at least one community in Missouri, mortality and morbidity rates have decreased. Evolving the system of care can significantly improve health outcomes for Missourians who suffer from stroke or STEMI."

The first phase of the project kicked off in December and will run through June, at which time the plan will be published. A second phase, lasting through July 2009, involves implementation.

"This Task Force is a unique convergence of different fields and expertise, and we all share a responsibility to provide for Missouri citizens and their health needs," said DHSS Director Jane Drummond. "That is our ultimate task: getting our trauma, stroke and STEMI patients the right care in the right place in the right amount of time." Missouri DHSS